Hepatitis A

Section 1

ABOUT THE DISEASE

A. Etiologic Agent

Hepatitis A is caused by the hepatitis A virus (HAV), an RNA virus in the picornavirus family.

B. Clinical Description

The onset of hepatitis A is usually abrupt, with fever, malaise, anorexia, nausea, and abdominal discomfort; some individuals may experience diarrhea. Jaundice (yellowing of the skin or whites of the eye, dark urine, and clay colored stool) may follow a few days later. Jaundice is present in 70% or more of adults with hepatitis A but is rare in infected children. Serum aminotransferase levels (ALT and AST) are often elevated. Infections vary from asymptomatic (common in young children) to disabling illness lasting several months. Generally, symptom severity increases with increasing age. The duration of symptomatic hepatitis A is typically less than two months. Prolonged, relapsing hepatitis for up to six months can occur in some cases. Hepatitis A is rarely fatal and has no chronic carrier state. The elderly and persons with chronic liver disease (including chronic hepatitis B or C) are at greater risk of severe hepatitis A and death. Hepatitis A is clinically indistinguishable from other types of hepatitis. It must be diagnosed through laboratory testing.

C. Vectors and Reservoirs

Humans with active infections (symptomatic or not) are the reservoir for this disease. Rarely, non-human primates can serve as a reservoir.

D. Modes of Transmission

The principal mode of transmission is direct or indirect person-to-person spread via the fecal-oral route. Persons become infected by ingesting the virus. It can happen in a variety of ways: through ready-to-eat or uncooked food (e.g., sandwiches, salads, ice cream, strawberries) contaminated by an infected food worker with poor hygiene; with contaminated produce (such as lettuce or strawberries) irrigated or processed with contaminated water; by exposure to shellfish harvested from fecally-contaminated waters and then consumed raw or undercooked; and by direct person-to-person contact, including sexual contact (e.g., anal contact). While hepatitis A can occur due to inadequate treatment of fecally-contaminated drinking water, waterborne outbreaks are rare in developed countries with well-maintained drinking water supplies and sanitation. Most hepatitis A infections occur from close contact with an infected household member or sex partner. Hepatitis A transmission can occur among people who inject drugs, but unlike other hepatitis viruses, hepatitis A is rarely spread through blood.

E. Incubation Period

The incubation period for hepatitis A ranges from 15–50 days, with an average of 28 days.

F. Period of Communicability or Infectious Period

Individuals are usually most infectious during the 1–2 weeks before their symptoms begin to about one week after symptom onset. Viral shedding in the stool is greatest during the two weeks before symptom onset.

G. Epidemiology

Hepatitis A has a worldwide distribution and occurs as sporadic cases and outbreaks. In countries where sanitation is poor, infection is common and occurs at an early age. Adults, therefore, are usually immune, and outbreaks of symptomatic disease are uncommon. In developed countries, recognized risk factors for disease transmission include daycare settings with diapered children in attendance, among household and sexual contacts of acute cases, among travelers to countries where the disease is common, and by close contact with a newly arriving international adoptee. Healthcare acquired infection is rare. There is a highly effective vaccine that prevents HAV infection. In the US, incidence of hepatitis A has decreased significantly since the licensing of the vaccine in 1995.

H. Bioterrorist Potential

This pathogen is not considered to be of risk for use in bioterrorism.

Section 2
REPORTING CRITERIA AND LABORATORY TESTING

A. What to Report to the Massachusetts Department of Public Health (MDPH)

Report any acute or active cases with:

- Demonstration of immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV) in the blood.

Note: See Section 3C for information on how to report a case.

B. Laboratory Testing Services Available

The Massachusetts State Public Health Laboratory (MA SPHL) does not provide routine testing services for evidence of infection with hepatitis A virus in clinical specimens or implicated food samples.

Section 3
REPORTING RESPONSIBILITIES AND CASE INVESTIGATION

A. Purpose of Surveillance and Reporting

- To confirm the hepatitis A infection diagnosis. False positive IgM results in adults without clinical symptoms of hepatitis A are occurring with greater frequency, especially in older adults. Because

many false positive results are observed, additional information must be obtained from the ordering provider to determine if an IgM positive result is due to hepatitis A.

- To identify whether the case may be a source of infection for other persons (e.g., a diapered child, daycare attendee, or food handler), and if so, to prevent further transmission.

- To identify sources of public health concern (e.g., a salad bar prepared by an infectious food handler), and to stop transmission from such a source.

B. Laboratory and Health Care Provider Reporting Requirements

Hepatitis A is reportable to the local board of health (LBOH). The MDPH requests that health care providers immediately report all confirmed or suspect cases of hepatitis A to the LBOH in the community where the case is diagnosed, as defined by the reporting criteria in Section 2A. If this is not possible, immediately call the MDPH Division of Epidemiology and Immunization at (617) 983-6800. Epidemiologists are available 24/7.

Laboratories performing examinations on any specimens derived from Massachusetts residents that yield a hepatitis A IgM+ result shall immediately report such evidence, directly by phone, to the MDPH Bureau of Infectious Disease and Laboratory Sciences (BIDLS), Office of Integrated Surveillance and Informatics Services (ISIS) at (617) 983-6801, or the Division of Epidemiology and Immunization at (617) 983-6800. Although these results are also reported automatically through electronic laboratory reporting (ELR) mechanisms, a phone call is still recommended.

C. Local Board of Health (LBOH) Reporting and Follow-Up Responsibilities

Reporting Requirements

MDPH regulations (*105 CMR 300.000*) stipulate that hepatitis A is reportable to the LBOH and that each LBOH must immediately report the occurrence of any acute or active (IgM+) case of hepatitis A, as defined by the reporting criteria in Section 2A. The majority of hepatitis A cases are reported directly to MDPH via case reporting forms or through ELR. Cases reported directly to MDPH via ELR will populate the MAVEN "Online LBOH Notification for Immediate Disease" workflow for acknowledgement by the appropriate LBOH. Cases not already in MAVEN should be reported to ISIS using MAVEN. LBOH not on MAVEN should report by phone and additional information collected using the *Hepatitis A Case Report Form*. Hepatitis A Case Report Forms can be faxed to ISIS at (617) 983-6813.

Refer to the List of Diseases Reportable to Local Boards of Health for information on prioritization and timeliness requirements of reporting and case investigation
http://www.mass.gov/eohhs/docs/dph/cdc/reporting/rprtbldiseases-lboh.pdf

Case Investigation

A LBOH that learns of an acute or active (IgM+) case of hepatitis A should immediately call the MDPH Division of Epidemiology and Immunization at (617) 983-6800. Epidemiologists are available 24/7.

Calling the provider

It is important to confirm the hepatitis A diagnosis with the ordering provider. First ensure that the test result is measuring IgM and not total anti-HAV antibodies. A positive total antibody test will only indicate that a person has IgG or IgM antibodies (or both). IgG antibody represents either past infection or immunization against hepatitis A. A specific IgM test is required to accurately categorize the case. If a case is total anti-HAV positive and IgM anti-HAV negative, no further actions are required and the case should be revoked. It must be determined if the IgM-HAV+ laboratory result represents an acute case of hepatitis A infection or a false positive laboratory result. Ascertaining the reason why the test was performed, ascertaining serum aminotransferase levels (ALT and AST) test results, and evaluating symptoms and symptom onset dates and times will help you and the healthcare provider make this determination. Even in the case of a false positive, the case's occupation and vaccination status should be noted.

It is the responsibility of the LBOH to complete the MDPH *Hepatitis* A question packages found in MAVEN by interviewing the case and others who may be able to provide the pertinent information. Much of the information required in MAVEN can be obtained from the health care provider, from other involved medical providers, or from the medical record.

The main objective in following up on a case of hepatitis A is to determine whether the case is likely to have transmitted his/her infection to others, including situations where a case is identified as a food handler, a patient care provider, or an employee of, or attendee in, a supervised care setting (e.g., a childcare setting or long-term care setting).

If the case was hospitalized (i.e. reporting facility is a hospital), call infection control at the named hospital. A list of infection preventionists can be found in the help section of MAVEN. If the case was seen at a clinician's office, ask to speak to a nurse working with the ordering provider.

Calling the case or parent/guardian of the case

Before calling the case, review the disease fact sheet by clicking on the Help Button located in MAVEN and/or the entire hepatitis A Guide chapter. The call may take a few minutes, so in order to maximize the chance of getting the information needed, it might be good to note the potential length of the call with your contact, and offer the opportunity to call back when it is more convenient. Asking questions about how the case or child is feeling may get the case or parent talking. If you are unable to answer a question they have, don't hesitate to call the Division of Epidemiology and Immunization at 617-983-6800 for assistance, and call the case back with the answer to their question. People are often more than willing to talk about their illness, and they may be very happy to speak with someone who can answer their questions.

Using MAVEN

Administrative Question Package

Open the Administrative Question Package (QP) and under the "Local Health and Investigation" section, answer the first question "**Step 1** - LBOH acknowledged" by selecting "Yes". The "LBOH acknowledged date" will then auto populate to the current day. Completing this first step will move the event out of this workflow and into your "Online LBOH notified but Case Report Forms (CRF) are pending" workflow. Note the date you started your investigation by answering "**Step 2** – Investigation started" as "Yes" and then note the date where shown. Record your name, agency, and phone numbers where shown in "**Step 3** - LBOH/Agency Investigator."

Demographic Question Package

Accurately record the case's demographic information, including occupation. If a case is unemployed, this should be clearly indicated. This information should be collected even in the case of a false positive result.

Clinical Question Package

Record all relevant clinical information, with particular attention to the symptom onset date. Because a case of hepatitis A is most infectious within two weeks before symptom onset, be sure to record the date of the onset of illness and symptom information accurately. If symptom onset date is unclear, use the date when jaundice was first noticed. If no symptoms were noted, the date the blood was drawn should be used as the date of onset for purposes of disease control. Record all available diagnostic laboratory test results.

Vaccine and IGIM information Question Package

Determine and enter in the question package, if the case has ever been vaccinated for hepatitis A. The Centers for Disease Control and Prevention (CDC) is interested in cases of breakthrough disease, i.e. HAV infection among people that have been previously vaccinated. Vaccination status should be determined for all cases, even those who are thought to be false positives.

Risk/Exposure/Control& Prevention Question Package

Record all information relevant to control and prevention of further cases, including risk history. Using the incubation period for hepatitis A (2-7 weeks), ask the case about food handling, supervised care settings, and other exposures during the incubation period before the illness started.

i. Food handling history: These questions (food handler, employment sections) are to assess the risk of transmitting infection via food, patient care (feeding or administering oral medications), etc. Determine whether the case is a food handler or patient care provider. If so, appropriate control measures need to be instituted. (See Section 4A for more information.)

ii. Supervised care settings: These questions are asked because hepatitis A is spread through the fecal oral route. Children with hepatitis A are often asymptomatic, however, they still shed the virus in their stool. People who are exposed to the fecal material of these cases could be exposed to hepatitis A. Determine whether the case is a child, resident, or employee in a supervised care facility. If so, appropriate control measures need to be instituted. (See Section 4A for more information.)

iii. Food consumption: These questions about raw shellfish consumption are asked because, on occasion, hepatitis A virus infection is associated with ingestion of uncooked or partially cooked shellfish from sewage-contaminated waters. If you suspect that the case became infected through the consumption of shellfish or other food(s), use the MDPH *Foodborne Illness Complaint Worksheet* online at http://www.mass.gov/eohhs/docs/dph/environmental/foodsafety/foodborne-ill-worksheet.pdf to facilitate recording additional information. It is requested that the LBOH fax or send this worksheet to the MDPH Bureau of Environment Health, Food Protection Program (FPP) (see top of worksheet for fax number and address) or enter the information directly into MAVEN by creating a new Foodborne Illness Complaint Event (this event should then be linked to the illness event).

iv. Contact with known cases: These questions are asked because hepatitis A can be spread through household or sexual contact.

v. Travel history: These questions are asked in order to identify where the case may have become infected. Because of poor sanitation and overcrowding, hepatitis A is endemic in many developing countries. A recent foreign travel history may be indicative of exposure outside of the US.

vi. Other risk factors: These questions are asked in order to obtain a full assessment of other people who may have been exposed to the case during their infectious period (e.g., sexual partners, drug using partners). Many of these questions are very sensitive, but this information can be critical in implementing appropriate control measures. Assure confidentiality for the case, and avoid appearing judgmental about a case's personal behavior or history.

Completing your Investigation

1. If you are finished with your case investigation and follow-up is complete, mark "**Step 4** – Case Report Form Completed" as "Yes" and then choose Local Board of Health (LBOH) –Ready for MDPH review for the "Completed by" variable.
2. If you have made several attempts to obtain case information but have been unsuccessful (e.g., the case or health care provider does not return your calls or respond to a letter, or the case refuses to divulge information or is too ill to be interviewed), please complete "**Step 4** - Case Report Form Completed" as "No" and then choose a primary reason why the case investigation was not completed from the choices provided in the primary reason answer variable list.
3. If you are not on MAVEN, you may submit a paper *Hepatitis A Case Report Form*. After completing the form, attach laboratory report(s) and fax or mail (in an envelope marked "Confidential") to ISIS. The confidential fax number is (617) 983-6813. Call ISIS at (617) 983-6801 to confirm receipt of your fax.

   The mailing address for ISIS is:

   MDPH, Office of Integrated Surveillance and Informatics Services (ISIS)
   305 South Street, 5th Floor
   Jamaica Plain, MA 02130
   Fax: (617) 983-6813

4. Institution of disease control measures is an integral part of case investigation. It is the responsibility of the LBOH to understand, and if necessary, institute the control guidelines listed in Section 4.

Section 4

CONTROLLING FURTHER SPREAD

A. Isolation and Quarantine Requirements *(105 CMR 300.200)*

Minimum Period of Isolation of Patient

Until one week after onset of symptoms or for cases where the onset date is not known, one week past the date the specimen positive for IgM antibody to HAV was provided.

Minimum Period of Quarantine of Contacts

No restrictions except for *susceptible** food handlers, who shall be excluded from their occupations for 28 days unless they receive a prophylactic dose of immune globulin intramuscular (IGIM) and/or hepatitis A vaccine within 14 days of exposure, or in accordance with the latest recommendations from MDPH.

*Documentation of HAV vaccination or demonstrated serologic evidence of immunity will avoid restrictions

Note: A food handler is any person directly preparing or handling food. This can include a patient care or childcare provider. See the Glossary (at the end of this manual) for a more complete definition.

B. Protection of Contacts of a Case

For public health intervention, a case is considered to be infectious for 14 days before the onset of symptoms to seven days after onset of symptoms. (Fecal shedding of the virus peaks during the week before onset of symptoms.) Control measures are implemented through the administration of IGIM or HAV vaccine to the people who had contact (see definition of contact directly below) with the case during their infectious period. IGIM or HAV vaccine should be administered as soon as possible after exposure, and are 80–90% effective in preventing hepatitis A if administered within 14 days of exposure.
A contact of a hepatitis A case is defined as:

- Household member;
- Sexual contact;
- Anyone who shared food or eating or drinking utensils with a case; or
- Anyone consuming ready-to-eat foods prepared by an infectious food worker with diarrhea or poor hygienic practices.

C. Hepatitis A Post-exposure Prophylaxis Recommendations

Both HAV vaccine and IGIM can be used to provide post-exposure prophylaxis up to two weeks after exposure. Selection of method is based on the age of the patient. There are two inactivated HAV vaccines available in the US that are recommended for post-exposure prophylaxis: Havrix® and Vaqta®. HAV vaccines are licensed for those 12 months of age or older and are administered in a 2-dose schedule. Pediatric and adult formulations are available. The adult formulation is recommended in those 19 years of age and older http://www.cdc.gov/hepatitis/hav/havfaq.htm#vaccine. IGIM is recommended for individuals younger than 12 months or 41 years or older, although those 41 years or older can also be given vaccine if IGIM is unavailable. IGIM is also recommended for people of any age who are immunocompromised, have chronic liver disease, or contraindication to vaccination. For all these groups, IGIM is given in one dose, at 0.02 mL/kg.

Table 1. Recommendations for Postexposure Prophylaxis of Individuals Exposed to Hepatitis A Virus (HAV)

Age of Patient	Recommended Prophylaxis
Younger than 12 months	IGIM (0.02 mL/kg)
12 months – 40 years	HAV vaccine
41 years or older	IGIM, but HAV vaccine can be used if IGIM is not available (0.02 mL/kg)
Individuals of any age who are immunocompromised, have chronic liver disease or are allergic to the vaccine or a vaccine component	IGIM (0.02 mL/kg)

*Note: Hepatitis A post-exposure prophylaxis should only be given to an individual within two weeks or less of their exposure

D. Managing Special Situations

Daycare

If a confirmed case of hepatitis A occurs in a childcare setting, parents and staff must be notified. Sample notification letters can be found in the MDPH Comprehensive School Health Manual https://massclearinghouse.ehs.state.ma.us/SCH/SH3001R.html or can be obtained from the Epidemiology Program at (617) 983-6800. Hepatitis A fact sheets should also be sent with the letter.

Prophylaxis (HAV vaccine or IGIM) should be administered to all previously unimmunized staff members and attendees of child care centers if: (1) one or more cases of hepatitis A are recognized in children or staff members; or (2) cases are recognized in two or more households of center attendees. In centers where children are old enough not to wear diapers, prophylaxis need only be given to classroom contacts of an index-case patient.

During an outbreak (i.e. hepatitis A cases in two or more families), prophylaxis should be considered for members of households that have children in diapers.

Children and adults with hepatitis A should be excluded from the center until one week after onset of illness. Unimmunized exposed children and adults at the center may return immediately after receiving prophylaxis.

Strictly enforce policies about hand washing (with children and staff) and about disinfecting objects and environmental surfaces with appropriate disinfectants, such as bleach solutions. Make sure all parents and staff know to notify the program if any person in their household is diagnosed with hepatitis A.

Note that childcare setting employees who prepare food, feed children, or administer medications to attendees are considered food handlers and must follow the isolation and quarantine requirements for food handling facility employees who are contacts of cases of hepatitis A (see Section 4A for more information).

School

Hepatitis A occurring in a school setting usually does not pose a significant risk of transmission, and widespread IGIM or HAV vaccine is usually not indicated when a single case occurs and the source of the infection is outside of the school. However, IGIM or HAV vaccine may be given to those who have personal contact with a case during the case's infectious period (e.g., sharing food or eating or drinking utensils with a case). If a case of hepatitis A occurs in a kindergarten or preschool class, or in a class where hygiene may not be optimal, more stringent control measures may be needed. Please refer to the *Daycare* section above for more information. (Sample notification letters are available in the MDPH *Comprehensive School Health* Manual, available at https://massclearinghouse.ehs.state.ma.us/SCH/SH3001R.html or from the Epidemiology Program at 617-983-6800).

Strictly enforce hand washing and cleanliness policies and ensure that all bathrooms are properly supplied with soap, paper towels, and toilet paper. Request that all parents and staff notify the school if any person in their household is diagnosed with hepatitis A.

Community Residential Programs

Actions taken in response to a case of HAV infection in a community residential program should be handled on a case-by-case basis. Management of contacts will depend on the level of hygiene of the case and the type of facility. Roommates and anyone sharing food or eating or drinking utensils should be considered household contacts and should be given IGIM or HAV vaccine within 14 days of exposure. If hepatitis A occurs in a staff member of a residential program, the case should be considered a food handler if there was an opportunity to feed, distribute medication, prepare foods, or perform dental procedures during the two weeks prior to symptom onset. Consult with an epidemiologist at the MDPH Division of Epidemiology and Immunization at (617) 983-6800 or (888) 658-2850.

Infected Food handler

A confirmed case of hepatitis A in a food handler is a potentially serious event and requires that risk for both coworkers and the public be assessed as quickly as possible. If a food handler is a confirmed case of hepatitis A, all other food handling employees in the facility must receive IGIM or HAV vaccine within two weeks of exposure. Unless the food handling facility employee contacts can produce documentation of vaccination against hepatitis A, can show immunity to HAV by serology, or they receive IGIM or HAV vaccine within two weeks of exposure, they must be excluded from work. The same exclusion criteria apply to any food handling contacts of any confirmed case. (See Section 4A for more information.) In order to

determine if the public needs to be notified of possible exposure to HAV, a complete food handling history of the case for the three week infectious period needs to be reviewed. This review should include dates worked, job duties, foods prepared, and whether gloves or other barrier protection were used by the food handler. Presence of certain symptoms, such as diarrhea, should also be considered. Please call the MDPH Division of Epidemiology and Immunization at (617) 983-6800 or to help determine the risk to the general public. Notification to patrons and possible administration of post-exposure prophylaxis is usually not recommended but should be considered if:

- During the time when the food handler was likely to be infectious, the food handler both directly handled cooked foods or foods that were served uncooked, and had diarrhea or poor hygienic practices; and

- Patrons can be identified and treated within two weeks after the exposure.

In settings where repeated exposures to HAV might have occurred (e.g., institutional cafeterias), stronger consideration of more widespread IGIM or HAV vaccine use might be warranted.

If it is determined that patrons would benefit from IGIM or HAV vaccine administration, the LBOH will be involved in posting public notices, issuing press releases, and/or holding press conferences to identify and inform patrons at risk and in coordinating the administration of IGIM or HAV vaccine to individuals. The MDPH Division of Epidemiology and Immunization staff are available to help plan and organize the clinic.

Hospitals

Administration of IGIM or HAV vaccine to hospital personnel caring for infected patients is not routinely indicated, unless an outbreak is occurring. However, if a hospital staff member is diagnosed with hepatitis A and can be considered a food handler, then the food handler guidelines must be followed. See Section 4A for more information. If an outbreak occurs, HAV vaccine or IGIM should be considered for those in close contact with the infected patient(s).

Reported Incidence Is Higher Than Usual/Outbreak Suspected

If the number of reported cases in your city/town is higher than usual or if you suspect an outbreak, investigate clustered cases to determine the source of infection and the mode of transmission. A common vehicle (e.g., food or association with a daycare center) should be sought, and applicable preventive or control measures should be instituted. Control of person-to-person transmission requires special emphasis on personal cleanliness and sanitary disposal of feces. Consult with the epidemiologist on-call at the MDPH Epidemiology Program at (617) 983-6800. MDPH epidemiologists can help determine a course of action to prevent further cases and can perform surveillance for cases across town lines, which would otherwise be difficult to identify at the local level.

E. Preventive Measures

Personal Preventive Measures/Education

HAV infection provides lifelong immunity.

In general, individuals can avoid exposure to the virus by:

- Always washing their hands thoroughly with soap and water before eating or preparing food and after using the toilet.

- Washing their own hands as well as the child's hands after changing diapers and disposing of feces in a sanitary manner.

Hands should be scrubbed for at least 15–20 seconds after cleaning the bathroom; after using the toilet or helping someone use the toilet; after changing diapers; before handling food; and before eating.

Hepatitis A vaccination should be considered for all children >12 months of age, for any person who wishes to be immune, for individuals with an increased risk of infection and for individuals who are at increased risk for complications for hepatitis A (see below).

Massachusetts residents at high risk of contracting hepatitis A or who are at increased risk for complications of hepatitis include the following:

- Persons (≥12 months of age) traveling to or working in countries with high or intermediate rates of hepatitis A endemnicity. The first dose of vaccine should be administered as soon as travel is considered. One dose of single-antigen vaccine administered at any time before departure can provide adequate protection for most healthy people.

- Men who have sex with men.

- Injecting and non-injecting drug users.

- Persons with chronic liver disease (not just infection), including those who are awaiting or have received liver transplants.

- Persons who receive clotting factor concentrates.

- Persons who have occupational risk for infection; specifically, those who work with HAV-infected primates or with HAV in a research laboratory setting. Sewage workers do not need to be vaccinated.

- Close contacts of a newly arriving international adoptee from a country with high or intermediate prevalence of hepatitis A. Vaccine should be given within the first 60 days of the international adoptee's arrival in the United States to susceptible people who will have close contact with the adoptee.

International Travel

Travelers to areas where hepatitis A is endemic should receive IGIM before travel under the following circumstances:

- If they are allergic to a component of the vaccine or elect not to receive vaccine;
- If they are <12 months old (vaccine is not licensed for this age group); or
- If they are older adults, immunocompromised, have chronic liver disease or another chronic medical condition and are traveling to an endemic area in <2 weeks, they may receive the initial dose of the vaccine and IGIM at the same time (in different anatomical sites). The vaccine series should then be completed according to schedule.

In addition, travelers should pay attention to what they eat and drink. This is extremely important because the vaccine is not 100% effective, and immunity from IGIM wears off with time. Taking precautions such as those listed below will help prevent other illnesses as well, including travelers' diarrhea, cholera, dysentery, and typhoid fever.

Recommendations to travelers include:

- "Boil it, cook it, peel it, or forget it."
- Drink only bottled or boiled water, keeping in mind that bottled carbonated beverages are safer than bottled noncarbonated ones.
- Ask for drinks without ice, unless the ice is made from bottled or boiled water.
- Avoid popsicles and flavored ices that may have been made with contaminated water.
- Eat foods that have been thoroughly cooked and are still hot and steaming.
- Avoid raw vegetables and fruits that cannot be peeled. Vegetables like lettuce are easily contaminated and are very hard to wash well.
- Peel their own raw fruits or vegetables, and do not eat the peelings.
- Avoid foods and beverages from street vendors.

For more information regarding international travel and hepatitis A, contact the Centers for Disease Control and Prevention's (CDC) Traveler's Health Office at (800) 232-4636 or on the CDC website at http://wwwnc.cdc.gov/travel/

The MDPH Hepatitis A Public Health Fact Sheet is available from the MDPH Division of Epidemiology and Immunization or on the MDPH website at http://www.mass.gov/eohhs/gov/departments/dph/programs/id/epidemiology/hepatitis/hepatitis-a.html The fact sheet is available in English, Chinese, French, Portuguese, Russian, Spanish and Vietnamese.

Section 5
ADDITIONAL INFORMATION

Following is the formal CDC surveillance case definition for hepatitis A. It is provided for your information only and should not affect the investigation or reporting of a case that fulfills the criteria in Section 2A of this chapter. (The CDC and the MDPH use the CDC case definitions to maintain uniform standards for national reporting.) For reporting to the MDPH, always use the criteria outlined in Section 2A.

Note: The most up-to-date CDC case definitions are available on the CDC website at *http://wwwn.cdc.gov/nndss/script/casedefDefault.aspx*

Clinical Case Definition

An acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), and either a) jaundice, or b) elevated serum alanine aminotransferase (ALT) or aspartate aminotransferase (AST) levels.

Laboratory Criteria for Diagnosis

Immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV) positive.

Case Classification

Confirmed

A case that meets the clinical case definition and is laboratory-confirmed, or a case that meets the clinical case definition and occurs in a person who has an epidemiologic link with a person who has laboratory-confirmed hepatitis A (i.e., household or sexual contact with an infected person during the 15–50 days before the onset of symptoms).

REFERENCES

American Academy of Pediatrics. [Hepatitis A.] In: Pickering L.K., ed. *Red Book: 2015 Report of the Committee on Infectious Diseases, 30th Edition.* Elk Grove Village, IL, American Academy of Pediatrics; 2015: 391–399.

CDC. Case Definitions for National Notifiable Disease Surveillance System, 2012
CDC. Prevention of Hepatitis A through Active or Passive Immunization. *MMWR.* October 1, 1999; 48(RR-12).

"Hepatitis A Information for Health Professionals." Centers for Disease Control and Prevention. August 27, 2015. http://www.cdc.gov/hepatitis/HAV/index.htm

Heymann, D., ed. *Control of Communicable Diseases Manual, 20th Edition*. Washington, DC, American Public Health Association, 2015.

MDPH. *The Comprehensive School Health Manual*. 2007. http://files.hria.org/files/SH3001.pdf

MDPH. *Foodborne Illness Investigation and Control Reference Manual.* Massachusetts Department of Public Health. 1997.
http://www.mass.gov/eohhs/docs/dph/environmental/foodsafety/ref-manual/intro-pages.pdf

MDPH. *Regulation 105 CMR 300.000: Reportable Diseases, Surveillance, and Isolation and Quarantine Requirements*. MDPH, Promulgated December 6, 2013.

NIH National Institute of Diabetes and Digestive and Kidney Diseases. Viral Hepatitis: A through E and Beyond. 2012 http://www.niddk.nih.gov/health-information/health-topics/liver-disease/viral-hepatitis-a-through-e/Pages/facts.aspx